



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,009	01/20/2004	Hiroshi Kuninaka	118382	6827
25944	7590	09/08/2004	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			SOUW, BERNARD E	
			ART UNIT	PAPER NUMBER
			2881	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/759,009	Applicant(s) KUNINAKA ET AL.	
	Examiner Bernard E Souw	Art Unit 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), (JP 2003-015829), filed 01/24/2003, which papers have been placed of record in the file.

### *Specification*

2. The lengthy specification has not been thoroughly checked to the extent necessary to determine the presence of all possible errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. A sample of unacceptable errors is given below.

### *Objection to the Specification*

3. A preliminary examination of this application reveals that it includes terminology which is so different from that which is generally accepted in the art to which this invention pertains that a proper search of the prior art cannot be made. A few examples are given in the following:

► In the Abstract, lines 3-4: "*The high velocity neutral particles are trapped*". One of ordinary skill in the art knows, applicant may want to mean "*The high velocity neutral particles are measured*", or "*detected*". Whether or not the detection involves some trapping, it does not change the fact that the neutrals are being detected or measured. By reciting only "trapping", the act of measuring or detecting is not definitely expressed,

and one of ordinary skill in the art is left completely puzzled/confused, what applicant is going to do with the “trapped” neutrals.

Applicant is required to provide a clarification of these matters or correlation with art-accepted terminology so that a proper comparison with the prior art can be made. Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

► In the specification, sect.[0002], the wording such as “As has gotten a lot of attention in the falling of the Mir space station ...”, is almost not understandable to those of skilled in the art.

► In the specification, sect.[0002], the further wording such as “if a large space structure is plunged into the atmosphere ...”, “it is concerned ...”, “affects on our social life”, “In this point of view”, “the orbit altitude ... may be decreased”, and “the plunge timing”, and etc. and etc., are all different from that which is generally accepted in the art and fail to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

### ***Substitute Specification Required***

4. Since the errors are so numerous and unacceptable, substitute specification including the claims is required pursuant to 37 CFR 1.125(a).

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the

immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. The claims are generally narrative and indefinite, failing to conform to current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

The following are a few examples of defective language in the claims with a tentative suggestion by the examiner how to correct them (the same defective language is also used in the specification):

In claim 1:

*"discharging --high velocity-- ion particles so as to be trapped with --by-- magnetic field lines of the earth, colliding said ion particles with high-altitude neutral air to generate high velocity neutral particles through charge exchange, and trapping --detecting or measuring-- said high velocity neutral particles to determine the distance to said high-altitude neutral air from at least one of the discharging positions of said ion particles and the trapping --detection-- positions of said high velocity neutral particles on --from-- the period of time between the discharging timings --time-- of --discharging-- said ion particles and the trapping timings --time-- of --detecting/measuring-- said high velocity neutral particles, to determine the --moving-- direction of said high-altitude neutral air on --from-- the --detected-- direction of said high velocity neutral particles, and to determine the space --spatial-- position of said high-altitude neutral air."*

#### **Indication of Allowable Subject Matter**

6. Claims 1-14 are objected to as containing unacceptable terminology and faulty language, but would be allowable if rewritten in proper language including all of the unacceptable terminologies.

#### **Reasons for Indication of Allowable Subject Matter**

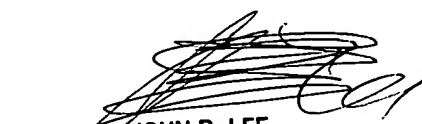
7. The following is a statement of reasons for the indication of allowable subject matter:

A method for measuring high altitude neutral air distribution comprising the steps of discharging high velocity ions so as to be trapped by the earth magnetic field,

colliding the ion particles with high-altitude neutral air molecules to generate high velocity neutral particles through charge exchange, and detecting and measuring the high velocity neutral particles to determine the distance to the high-altitude neutral air from the discharging positions of the ion particles and the detection positions of the high velocity neutral particles from the period of time between the time of discharging the ion particles and the time of detecting/measuring the high velocity neutral particles, to determine the moving direction of the high-altitude neutral air molecules from the detected direction of the high velocity neutral particles, and to determine the spatial position of said high-altitude neutral air, has neither been anticipated nor rendered obvious by any prior art.

***Relevant Prior Art***

8. These prior arts made of record and not relied upon are considered pertinent to applicant's disclosure: USPAT # 3,742,219, issued on 06/26/1973 to Damm et al., USPAT # 4,434,131, issued on 02/28/1984 to Dagenhart et al., and USPAT # , issued on 04/18/1972 to Futch, Jr. et al., disclose similar methods of generating high velocity neutral particles by means of charge transfer to high velocity ions. However, they would have been applicable as prior art(s) only under §103 rejection. Furthermore, the purpose and steps for implementing the method as well as their pertinent environment are completely different.

  
JOHN R. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

***Communications***

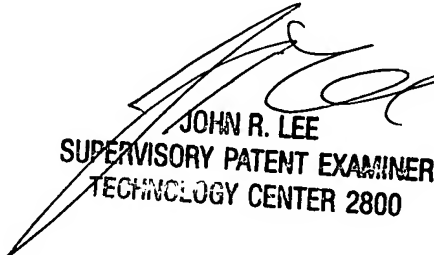
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard E Souw whose telephone number is 571 272 2482. The examiner can normally be reached on Monday thru Friday, 9:00 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571 272 2477. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications as well as for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

bes

September 01, 2004

  
JOHN R. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800